

Name _____
 Chemistry AF
 Ion Sheet

Date _____

In order to succeed in chemistry, you must know the names and charges of the following ions

1+	2+	3+	4+
copper (I), Cu^+ silver, Ag^+ Polyatomic Ions: ammonium, NH_4^+ hydronium, H_3O^+	cadmium, Cd^{2+} cobalt (II), Co^{2+} copper (II), Cu^{2+} iron (II), Fe^{2+} lead (II), Pb^{2+} mercury (I), Hg_2^{2+} mercury (II), Hg^{2+} nickel (II), Ni^{2+} zinc, Zn^{2+} tin (II), Sn^{2+}	chromium(III), Cr^{3+} iron (III), Fe^{3+} nickel (III), Ni^{3+}	tin (IV), Sn^{4+} lead (IV), Pb^{4+}

1-	2-	3-
acetate, $\text{C}_2\text{H}_3\text{O}_2^-$ hydrogen carbonate or bicarbonate HCO_3^- hydrogen sulfate, HSO_4^- hydroxide, OH^- nitrate, NO_3^- nitrite, NO_2^- permanganate, MnO_4^- hypochlorite, ClO^- chlorite, ClO_2^- chlorate, ClO_3^- perchlorate, ClO_4^- cyanide, CN^- thiocyanate, SCN^-	carbonate, CO_3^{2-} chromate, CrO_4^{2-} dichromate, $\text{Cr}_2\text{O}_7^{2-}$ oxalate, $\text{C}_2\text{O}_4^{2-}$ peroxide, O_2^{2-} sulfate, SO_4^{2-} sulfite, SO_3^{2-} thiosulfate, $\text{S}_2\text{O}_3^{2-}$	phosphate, PO_4^{3-}

While looking at a periodic table, or a formula for an ionic compound, be able to determine the charges of the ions that the element will be most likely to form. Some examples are listed below:

Lithium, Li^+
 Cesium, Cs^+
 Potassium, K^+
 Sodium, Na^+
 Barium, Ba^{2+}
 Beryllium, Be^{2+}
 Calcium, Ca^{2+}
 Magnesium, Mg^{2+}
 Strontium, Sr^{2+}
 Aluminum, Al^{3+}

Oxide, O^{2-}
 Sulfide, S^{2-}
 Nitride, N^{3-}
 Phosphide, P^{3-}

Halogens:
 Bromide, Br^-
 Chloride, Cl^-
 Fluoride, F^-
 Iodide, I^-

Diatomics:

Hydrogen, H_2
 Nitrogen, N_2
 Oxygen, O_2
 Fluorine, F_2
 Chlorine, Cl_2
 Bromine, Br_2
 Iodine, I_2

